AMENDMENTS TO THE SPECIFICATION

On page 4, paragraph [0013], please replace paragraph [0013] with following amended paragraph [0013], which deletes ", for example,":

[0013] Conventional configuration of fluid flow restrictors, such as restrictive flow orifices, has been documented. For example, guidance on the conventional configuration of restrictive flow orifices is provided~~, for example,~~ by the Semiconductor Equipment and Materials International (SEMI) Standards S5-93 and S5-0703. These SEMI Standards provide a safety guideline method for limiting the release of hazardous gases from a gas cylinder valve during transportation, storage and use. The SEMI Standards recommend that conventional flow limiting devices limit mass flow to a maximum allowable mass flow release rate based on full flow conditions, i.e. high tank pressures at 700 kilopascals (100 pounds per square inch gage) and higher. Other standards may contemplate maximum allowable mass flow rates based on higher or lower tank pressures depending on the user's application and the hazardous fluid used.

On page 20, paragraph [0070], please replace paragraph [0070] with following amended paragraph [0070], which changes "fifty-two" to "fifty-two and eight-tenths":

[0070] Conversely, critical fluid flow (also called "choked flow" or flow at "sonic velocity") occurs when $R_p < R_c$. Or, put another way, critical flow occurs when the downstream absolute pressure (P_2) is fifty-two and eight-tenths percent (52.8%) of the upstream absolute pressure (P_1). In the critical flow regime, the fluid flow reaches its sonic velocity, so that the mass flow rate depends only on the density of the gas as it passes through the narrowest opening. As a result, critical flow does not depend on the downstream pressure as long as $R_p < R_c$.

On pages 23 to 24, paragraph [0074], please replace paragraph [0074] with following amended paragraph [0074], which changes ".3511 millimeters (.0138 inches)" to "0.3511 millimeters (0.0138 inches)":

[0074] For example, when silane is passed through a fluid flow restrictor, in this case, a restrictive flow orifice, the maximum allowable fluid flow rate through the orifice set forth by the Semi Standard S5-93 is 7.6 standard liters per minute (slpm), which is computed assuming a full tank pressure of 700 kilopascals (kPa), *i.e.*, full flow conditions, and the C-type orifice size. Under such pressure and flow rate conditions, solving the mass flow rate equations for area and assuming critical flow, the cross-sectional area of the opening of the fluid flow restricting path called for by the SEMI S5-93 standard is 0.3511 millimeters (0.0138 inches). Specifically, the cross-sectional area of the opening through fluid flow restricting path of the flow restrictor is computed as follows:

temperature = 294.2 K (21.1 °C),

$P_1 = 7.00 \times 10^6$ Pa,

$P_2 = 1.01 \times 10^5$ Pa,

M = 0.0321 kg/gmole,

k = 1.25,

Mass Flow Rate = 1.83×10^{-4} kg/s

(note that vapor density at 0 °C and 101325 Pa (STP) is 1.44 kg per cubic meter, so 1.83×10^{-4} kg per second is equivalent to 7.6 slpm),

$R_p = 0.017$,

Rc = 0.555,

Z = 0.558 (silane is a highly non-ideal gas),

and $C_w = 0.85$.

$$MFR = (0.85)(OrificeArea)\sqrt{\frac{(1.25)(7.00\times10^{6}\,Pa)^{2}\left(0.0321\,{}^{kg}/_{mole}\right)}{(0.558)\left(8.314\,{}^{J}/_{mol\cdot K}\right)(294.2K)}\left(\frac{2}{2.25}\right)^{\frac{2.25}{0.25}}}$$

Design Orifice Area = 9.68×10^{-8} m^2

(therefore, d = 3.51×10^{-4} m,

where A = $\frac{\pi d^2}{4}$ (m^2)(for a round orifice)

On page 23, paragraph [0075], please replace paragraph [0075] with following amended paragraph [0075], which changes ".9314 millimeters (.0367 inches) at 99 kPa and about .4149 millimeters (.0163 inches) at 499 kPa. The smaller .4149 mm" to "0.9314 millimeters (0.0367 inches) at 99 kPa and about 0.4149 millimeters (0.0163 inches) at 499 kPa. The smaller 0.4149 mm":

[0075] In contrast, the present invention configured with a flow restrictor, here a restrictive flow orifice, to allow 7.6 standard liters per minute (slpm) mass flow rate at the pressure delivered to the fluid flow restrictor, which typically ranges from about 99 kPa to about 499 kPa, equates to orifice diameters corresponding to about 0.9314 millimeters (0.0367 inches) at 99 kPa and about 0.4149 millimeters (0.0163 inches) at 499 kPa. The smaller 0.4149 mm orifice will allow, solving the above equation for the mass flow rate at critical flow and at 700 kilopascals, a flow rate of 10.67 slpm, which exceeds the SEMI standard.